

(FILE 'HOME' ENTERED AT 14:13:34 ON 13 DEC 1999)

FILE 'MEDLINE' ENTERED AT 14:15:14 ON 13 DEC 1999

L1 3252 S HOMOLOGOUS RECOMBINATION

L2 123 S GAP REPAIR

L3 40170 S LIBRAR?

L4 610822 S VITRO

L5 0 S L1 AND L2 AND L3 AND L4

L6 13 S L1 AND L3 AND L4

L7 250742 S VIVO

L8 17 S L1 AND L3 AND L7

L9 29 S L6 OR L8

L10 15 S L1 AND L3 AND RESTRICTION ENZYME

L11 11 S L10 NOT L9

L9 ANSWER 1 OF 29 MEDLINE  
TI In vivo construction of cDNA **libraries** for use in the yeast two-hybrid system.

L9 ANSWER 2 OF 29 MEDLINE  
TI Protein evolution by molecular breeding.

L9 ANSWER 3 OF 29 MEDLINE  
TI Structure-function analyses of thrombomodulin by gene-targeting in mice: the cytoplasmic domain is not required for normal fetal development.

L9 ANSWER 4 OF 29 MEDLINE  
TI Construction and analysis of a *Streptococcus parasanguis* recA mutant: **homologous recombination** is not required for adhesion in an *in vitro* tooth surface model.

L9 ANSWER 5 OF 29 MEDLINE  
TI Targeting and retrofitting pre-existing **libraries** of transposon insertions with FRT and oriV elements for *in-vivo* generation of large quantities of any genomic fragment.

L9 ANSWER 6 OF 29 MEDLINE *Current Biol.* (1998 Dec 3) 8(24) 1300-9.  
TI The univector plasmid-fusion system, a method for rapid construction of recombinant DNA without restriction enzymes.

L9 ANSWER 7 OF 29 MEDLINE  
TI Large-scale identification of virulence genes from *Streptococcus pneumoniae*.

L9 ANSWER 8 OF 29 MEDLINE  
TI An introduction to the genetics of normal and defective hearing.

L9 ANSWER 9 OF 29 MEDLINE *Gene* (June 1998) 212(2) 315-22 ✓  
TI Recombination trapping: an *in-vivo* approach to recover cDNAs encoded in YACs.

L9 ANSWER 10 OF 29 MEDLINE  
TI Role of *rpoS* in stress survival and virulence of *Vibrio cholerae*.

L9 ANSWER 11 OF 29 MEDLINE  
TI Use of an inducible regulatory protein to identify members of a regulon: application to the regulon controlled by the leucine-responsive regulatory protein (Lrp) in *Escherichia coli*.

L9 ANSWER 12 OF 29 MEDLINE  
TI Cardiotrophin-1 and the role of gp130-dependent signaling pathways in cardiac growth and development.

L9 ANSWER 13 OF 29 MEDLINE  
TI NRF2, a member of the NFE2 family of transcription factors, is not essential for murine erythropoiesis, growth, and development.

L9 ANSWER 14 OF 29 MEDLINE  
TI Expression and loading of recombinant heavy and light chain homopolymers of rat liver ferritin.

L9 ANSWER 15 OF 29 MEDLINE

TI CD40-deficient mice generated by recombination-activating gene-2-deficient blastocyst complementation.

L9 ANSWER 16 OF 29 MEDLINE  
TI Molecular cloning and restriction mapping of human lymphotoxin gene.

L9 ANSWER 17 OF 29 MEDLINE  
TI Embryonic stem cells lacking a functional inhibitory G-protein subunit (alpha i2) produced by gene targeting of both alleles.

L9 ANSWER 18 OF 29 MEDLINE  
TI The proteinase yscA-inhibitor, IA3, gene. Studies of cytoplasmic proteinase inhibitor deficiency on yeast physiology.

L9 ANSWER 19 OF 29 MEDLINE  
TI A phosphate group at the cos ends of phage lambda DNA is not a prerequisite for *in vitro* packaging: an alternative method for constructing genomic **libraries** using a new phasmid vector, lambda pGY97.

L9 ANSWER 20 OF 29 MEDLINE  
TI The selective isolation of cosmid clones by **homologous recombination** in *Escherichia coli*--a cosmid clone containing a complex linkage DNA sequence of mouse was isolated.

L9 ANSWER 21 OF 29 MEDLINE  
TI Modification and transfer into an embryonal carcinoma cell line of a 360-kilobase human-derived yeast artificial chromosome.

L9 ANSWER 22 OF 29 MEDLINE **PNAS (1990 Apr) 87(8) 3166-9**  
TI Improved genetic selection for screening bacteriophage **libraries** by **homologous recombination** *in vivo*.

L9 ANSWER 23 OF 29 MEDLINE  
TI A new cloning system for *Bacillus subtilis* comprising elements of phage, plasmid and transposon vectors.

L9 ANSWER 24 OF 29 MEDLINE  
TI Syrinx 2A: an improved lambda phage vector designed for screening DNA **libraries** by recombination *in vivo*.

L9 ANSWER 25 OF 29 MEDLINE  
TI Cloning of the recA gene of *Neisseria gonorrhoeae* and construction of gonococcal recA mutants.

L9 ANSWER 26 OF 29 MEDLINE  
TI Molecular cloning and characterization of the STA2 glucoamylase gene of *Saccharomyces diastaticus*.

L9 ANSWER 27 OF 29 MEDLINE  
TI Isolation of a functional human interleukin 2 gene from a cosmid **library** by recombination *in vivo*.

L9 ANSWER 28 OF 29 MEDLINE  
TI Isolation of the SUP45 omnipotent suppressor gene of *Saccharomyces cerevisiae* and characterization of its gene product.

L9 ANSWER 29 OF 29 MEDLINE  
TI Selective isolation of cosmid clones by **homologous recombination** in *Escherichia coli*.

(FILE 'USPAT' ENTERED AT 08:59:26 ON 14 SEP 1999)

L1           QUE DNA OR DEOXYRIBONUCL? OR NUCLEIC ACID  
L2           QUE IN VIVO  
L3           3354 S (TWO (3A) HYBRID) OR (TWO-HYBRID)  
L4           QUE ASSAY  
L5           QUE LIBRARY  
L6           423 S L1 AND L2 AND L3 AND L4 AND L5  
L7           QUE VECTOR  
L8           2257 S DNA LIBRARY  
L9           116 S L6 AND L7 AND L8  
L10          98 S TWO HYBRID ASSAY  
L11          0 S TWO HYBRID ASSAY/TI  
L12          22 S TWO HYBRID AND ASSAY/TI  
L13          1365 S CONSTRUCT? AND DNA LIBRARY AND VIVO  
L14          1271 S L13 AND ASSAY  
L15          0 S (CONSTRUCT? AND DNA LIBRARY AND VIVO)/TI  
L16          0 S CONSTRUCT? AND DNA LIBRARY/TI AND VIVO  
L17          3 S DNA LIBRARY/TI  
L18          137 S L1 AND L4 AND L5 AND L3 AND L8  
L19          372 S TWO HYBRID AND ASSAY  
L20          2 S TWO HYBRID/TI AND ASSAY

(FILE 'USPAT' ENTERED AT 10:08:18 ON 14 SEP 1999)  
L1 684 S TWO HYBRID AND (SYSTEM OR ASSAY)  
L2 3773 S (DNA OR NUCLEIC ACID) (3A) LIBRAR? AND CONSTRUC?  
L3 155 S L1 AND L2  
L4 895 S (DNA OR NUCLEIC ACID) (3A) LIBRAR? (10A) CONSTRUC?  
L5 27 S L1 AND L4

au Search  
12/13/99

(FILE 'HOME' ENTERED AT 12:45:12 ON 13 DEC 1999)

FILE 'MEDLINE, BIOSIS, CAPLUS, EMBASE, SCISEARCH' ENTERED AT 12:45:26 ON  
13 DEC 1999

L1 E ZERVOS/AU  
90 S E3-E8  
L2 48 DUPLICATE REMOVE L1 (42 DUPLICATES REMOVED)  
L3 13 S L2 AND DNA  
L4 3 S L3 AND VIVO

FILE 'STNGUIDE' ENTERED AT 12:46:56 ON 13 DEC 1999

FILE 'MEDLINE, BIOSIS, CAPLUS, EMBASE, SCISEARCH' ENTERED AT 12:47:45 ON  
13 DEC 1999

L5 3 S L2 AND LIBRAR?  
L6 1 S L5 NOT L4

L3 ANSWER 1 OF 13 MEDLINE  
TI In vivo construction of cDNA libraries for use in the yeast two-hybrid system.

L3 ANSWER 2 OF 13 MEDLINE  
TI Molecular cloning and characterization of a novel retinoblastoma-binding protein.

L3 ANSWER 3 OF 13 MEDLINE  
TI Isolation and characterization of Nmi, a novel partner of Myc proteins.

L3 ANSWER 4 OF 13 MEDLINE  
TI Mxi2, a mitogen-activated protein kinase that recognizes and phosphorylates Max protein.

L3 ANSWER 5 OF 13 MEDLINE  
TI Murine chromosomal location of five bHLH-Zip transcription factor genes.

L3 ANSWER 6 OF 13 MEDLINE  
TI Mxi1, a protein that specifically interacts with Max to bind Myc-Max recognition sites.

L3 ANSWER 7 OF 13 MEDLINE  
TI Mapping of two genes encoding members of a distinct subfamily of MAX interacting proteins: MAD to human chromosome 2 and mouse chromosome 6, and MXI1 to human chromosome 10 and mouse chromosome 19.

L3 ANSWER 8 OF 13 MEDLINE  
TI Mxi1, a protein that specifically interacts with Max to bind Myc-Max recognition sites [published erratum appears in Cell 1994 Oct 21; 79(2):following 388].

L3 ANSWER 9 OF 13 BIOSIS COPYRIGHT 1999 BIOSIS  
TI Isolation and characterization of a microphthalmia interacting protein that inhibits tyrosinase expression in human melanocytes.

L3 ANSWER 10 OF 13 BIOSIS COPYRIGHT 1999 BIOSIS  
TI Molecular studies on the function of microphthalmia gene and its role in melanogenesis.

L3 ANSWER 11 OF 13 BIOSIS COPYRIGHT 1999 BIOSIS  
TI MAX STIMULATION OF MYC DEPENDENT TRANSCRIPTION IS IT INCREASED **DNA** BINDING OR INCREASED ACTIVATION POTENTIAL?.

L3 ANSWER 12 OF 13 BIOSIS COPYRIGHT 1999 BIOSIS  
TI DETECTION OF A LOW ABUNDANCE MESSENGER RNA FOR A MEMBRANE PROTEIN ASSOCIATED WITH INTER CELLULAR CHANNELS USING SYNTHETIC OLIGO NUCLEOTIDES.

L3 ANSWER 13 OF 13 CAPLUS COPYRIGHT 1999 ACS  
TI In vivo construction of **DNA** libraries

L4 ANSWER 1 OF 3 MEDLINE  
 ACCESSION NUMBER: 1999320745 MEDLINE  
 DOCUMENT NUMBER: 99320745  
 TITLE: In vivo construction of cDNA libraries for use in  
 the yeast two-hybrid system.  
 AUTHOR: Fusco C; Guidotti E; **Zervos A S**  
 CORPORATE SOURCE: Cutaneous Biology Research Center, Massachusetts General  
 Hospital, Harvard Medical School, Charlestown 02129, USA.  
 SOURCE: YEAST, (1999 Jun 15) 15 (8) 715-20.  
 Journal code: YEA. ISSN: 0749-503X.  
 PUB. COUNTRY: ENGLAND: United Kingdom  
 Journal; Article; (JOURNAL ARTICLE)  
 LANGUAGE: English  
 FILE SEGMENT: Priority Journals  
 ENTRY MONTH: 199911  
 ENTRY WEEK: 19991103  
 AB We describe a simple and efficient one-step method to make cDNA libraries  
 using homologous recombination in yeast. cDNA from any source, together  
 with a linear vector, is used to transform yeast. Through homologous  
 recombination and gap repair, the cDNA is unidirectionally incorporated  
 into the yeast expression vector in vivo. The cDNA-encoded  
 proteins can then be screened for potential protein-protein interactions  
 with a bait already present in the yeast. This method allows rapid  
 construction and screening of cDNA libraries, even from extremely small  
 amounts of mRNA, and can replace the use of conventional cDNA libraries.

L4 ANSWER 3 OF 3 CAPLUS COPYRIGHT 1999 ACS  
 ACCESSION NUMBER: 1999:511265 CAPLUS  
 DOCUMENT NUMBER: 131:140467  
 TITLE: In vivo construction of DNA  
 libraries  
 INVENTOR(S): **Zervos, Antonis**  
 PATENT ASSIGNEE(S): General Hospital Corp., USA  
 SOURCE: PCT Int. Appl., 47 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 9940208	A1	19990812	WO 1999-US2591	19990205
W: CA, JP				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				

PRIORITY APPLN. INFO.: US 1998-PV73817 19980205  
 AB The invention provides methods of prep. a plurality of nucleic acid  
 insert mols. The invention also provides methods of constructing a  
 DNA library in vivo. Gap repair cloning using different  
 sizes of overlap of DNA sequences between the Mx11 DNA  
 and pJG-4.5 yeast vector was demonstrated. A kit allowing the  
 interchangeable use of a DNA library in more than one  
 application is also provided. Finally, the invention provides a method  
 for screening subjects for the existence of lesions in a gene encoding a  
 particular protein.